

## **EXHIBIT 10**



US005922021A

**United States Patent** [19]

Jang

[11] Patent Number: **5,922,021**[45] Date of Patent: **\*Jul. 13, 1999**[54] **INTRAVASCULAR STENT**[76] Inventor: **G. David Jang, 30725 Eastburn La., Redlands, Calif. 92374**

[\*] Notice: This patent is subject to a terminal disclaimer.

[21] Appl. No.: **08/845,657**[22] Filed: **Apr. 25, 1997****Related U.S. Application Data**[63] Continuation-in-part of application No. 08/824,142, Mar. 25, 1997, application No. 08/824,866, Mar. 25, 1997, and application No. 08/824,865, Mar. 25, 1997  
[60] Provisional application No. 60/017,484, Apr. 26, 1996.[51] Int. Cl.<sup>6</sup> ..... **A61F 2/06**  
[52] U.S. Cl. .... **623/1; 623/12**  
[58] Field of Search ..... **623/1, 11, 12; 606/108, 191, 194, 195, 198**[56] **References Cited****U.S. PATENT DOCUMENTS**

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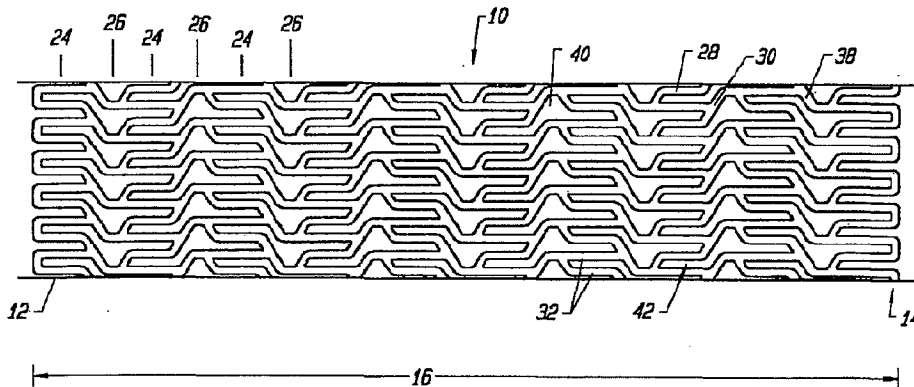
Primary Examiner—David H. Willse

Assistant Examiner—Tram A. Nguyen

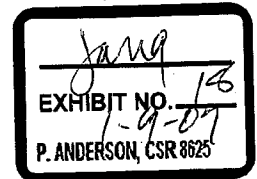
Attorney, Agent, or Firm—Wilson Sonsini Goodrich &amp; Rosati

[57] **ABSTRACT**

A stent in a non-expanded state has a first expansion strut pair consisting of a first expansion strut positioned adjacent to a second expansion strut and a joining strut which couples the first and second expansion struts at a distal end of the first expansion strut pair. A plurality of the first expansion strut pair form a first expansion column. A second expansion strut pair consists of a first expansion strut positioned adjacent to a second expansion strut and a joining strut couples the first and second expansion struts at a proximal end of the second expansion strut pair. A plurality of the second expansion strut pair form a second expansion column. A first connecting strut includes a first connecting strut proximal section, a first connecting strut distal section and a first connecting strut intermediate section. The first connecting strut proximal section is coupled to the distal end of the first expansion strut pair in the first expansion column and the first connecting strut distal section is coupled to the proximal end of the second expansion strut pair of the second expansion column. A plurality of the first connecting struts form a first connecting strut column that couples the first expansion column to the second expansion column. A length of the first connecting strut proximal section is equal to a length of the first connecting strut distal section, and a length of the first connecting strut intermediate section is greater than the length of the first connecting strut proximal and distal sections.

**85 Claims, 27 Drawing Sheets**

41 pgs.



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146

18-1

U.S. Patent

Jul. 13, 1999

Sheet 1 of 27

5,922,021

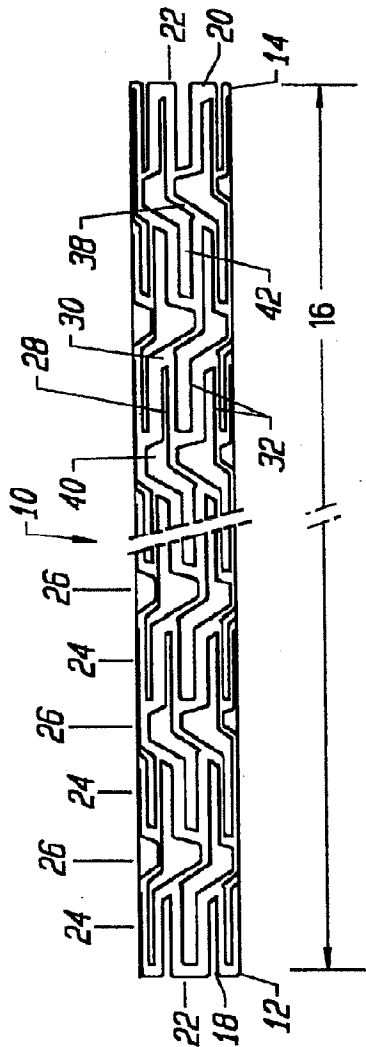


FIG. 1A

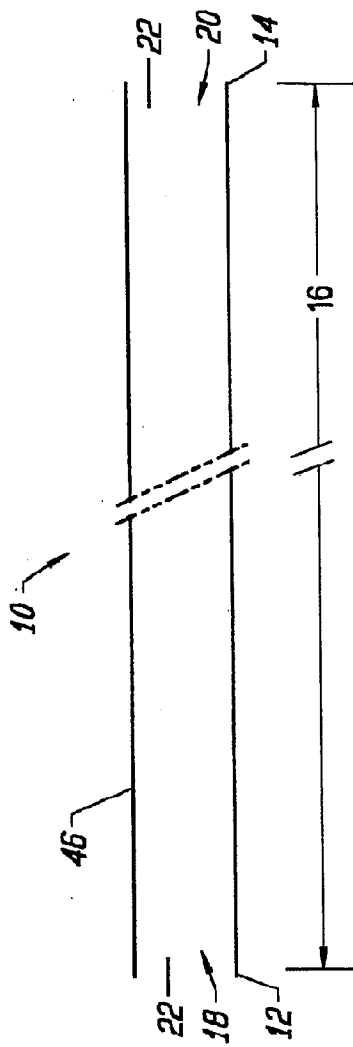


FIG. 1B

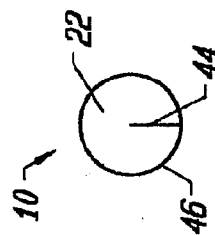


FIG. 1C

18-0

U.S. Patent

Jul. 13, 1999

Sheet 2 of 27

5,922,021

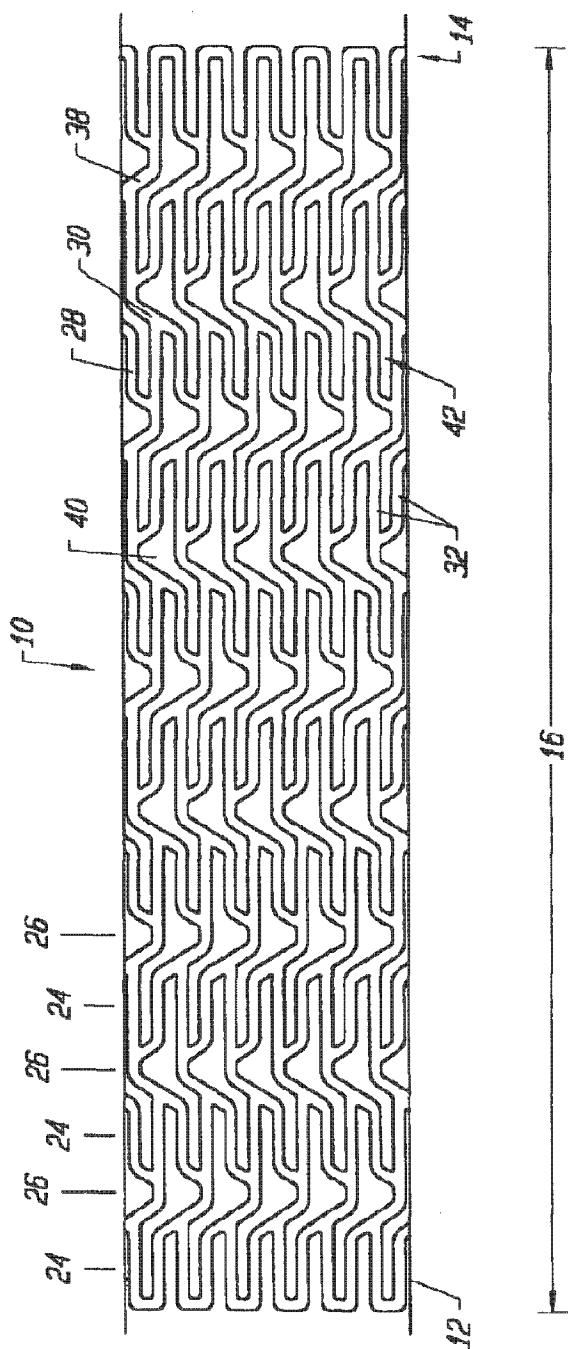


FIG. 2A

18-3

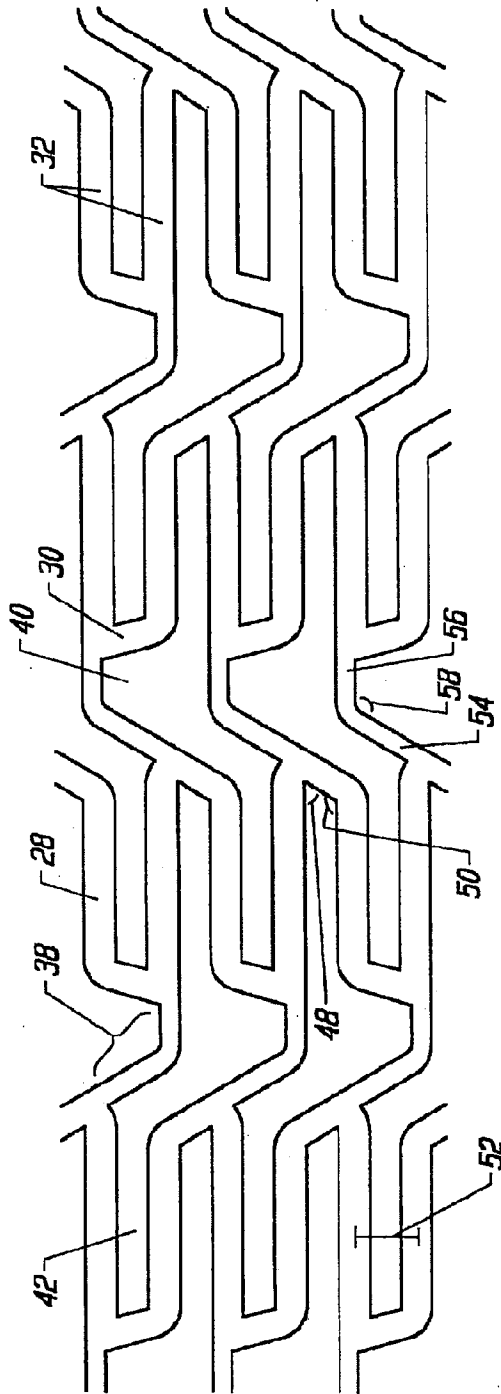
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U.S. Patent

Jul. 13, 1999

Sheet 3 of 27

5,922,021



18-46

CM 000004

U.S. Patent

Jul. 13, 1999

Sheet 4 of 27

5,922,021

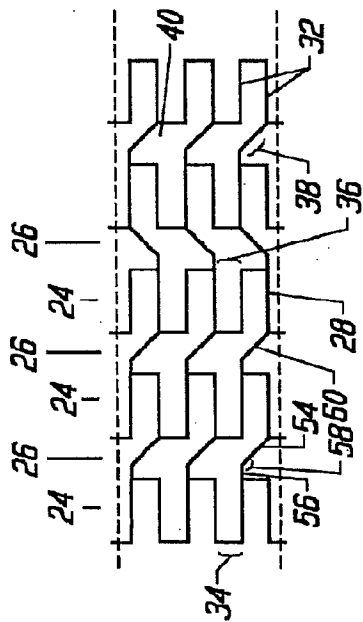


FIG. 3A

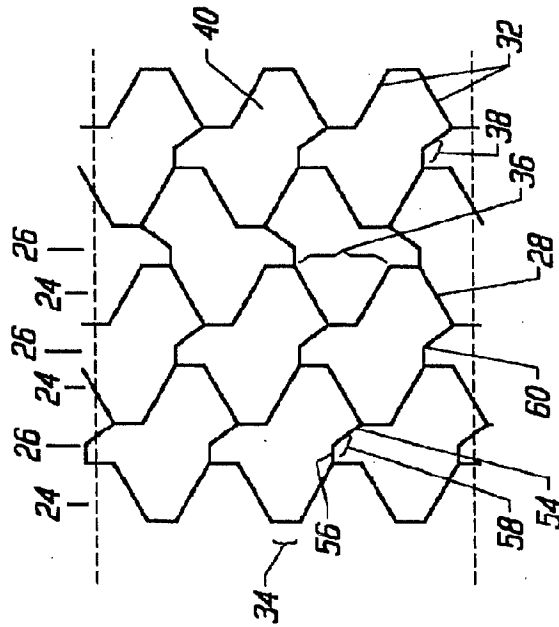
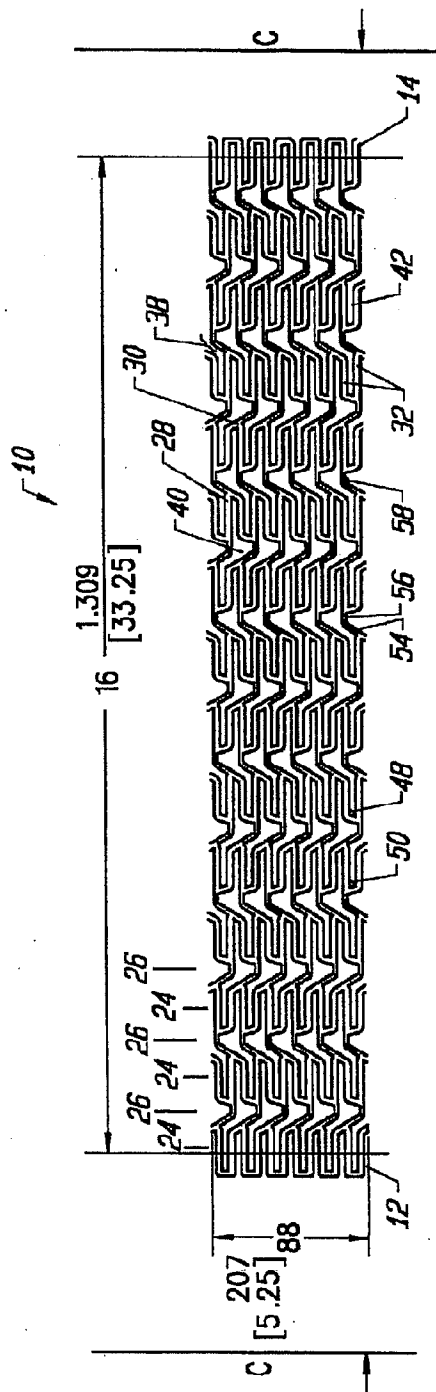
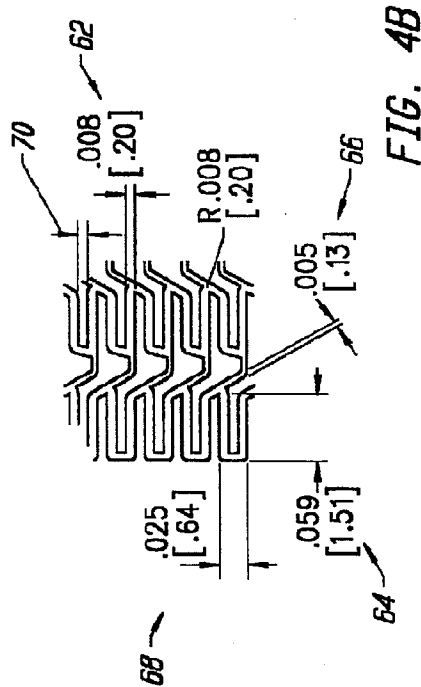


FIG. 3B

185



**FIG. 4A**



**FIG. 4B**

18-6

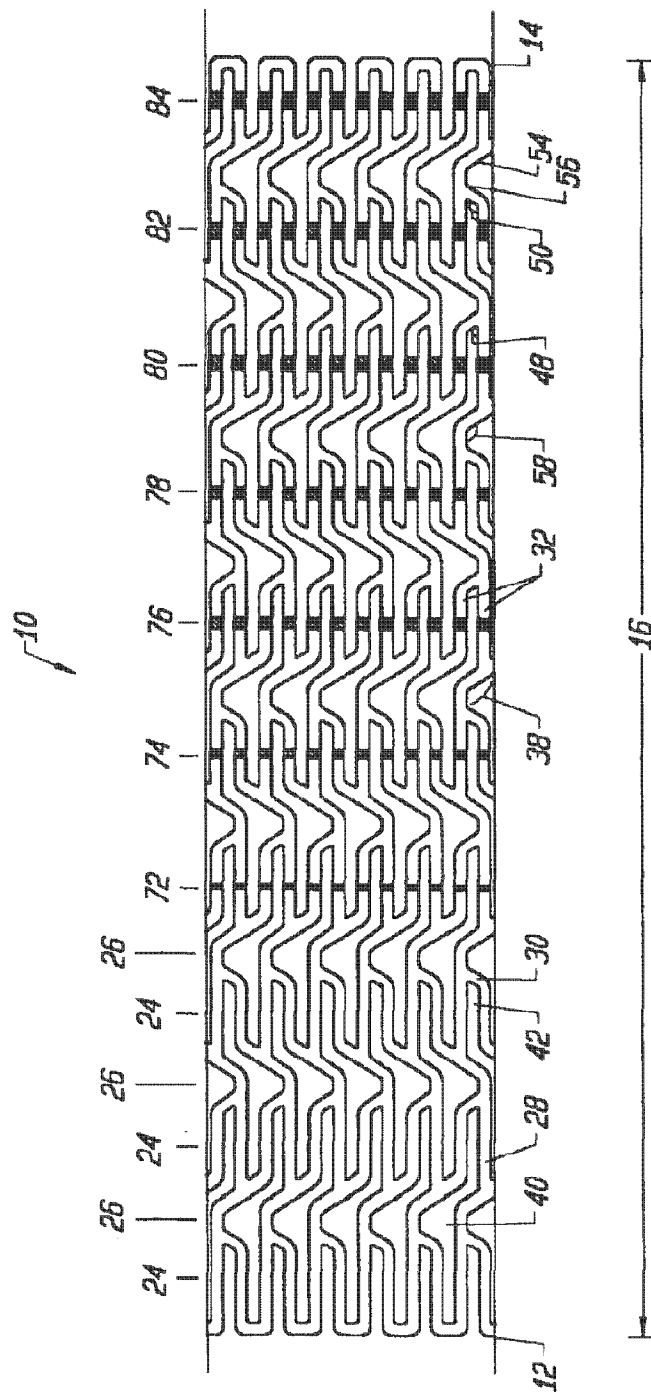


FIG. 5

14-7

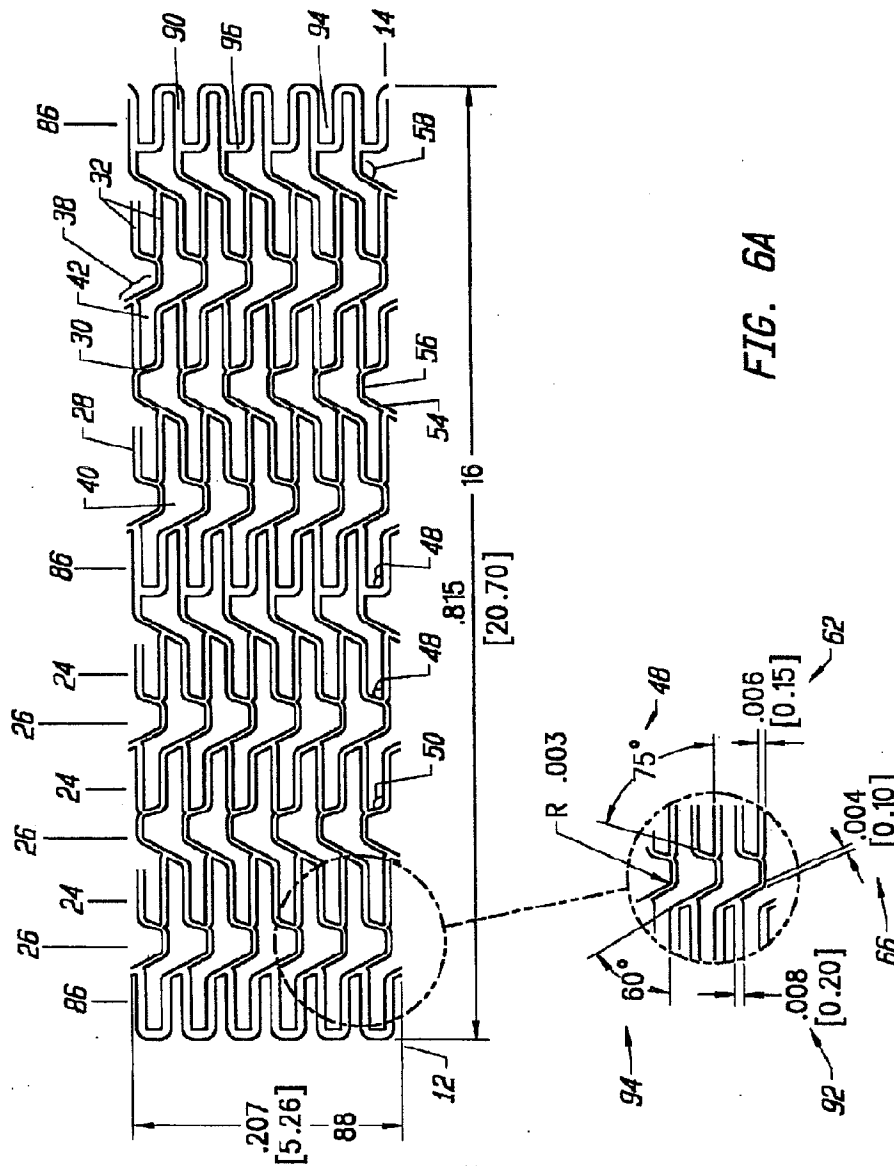


FIG. 6A

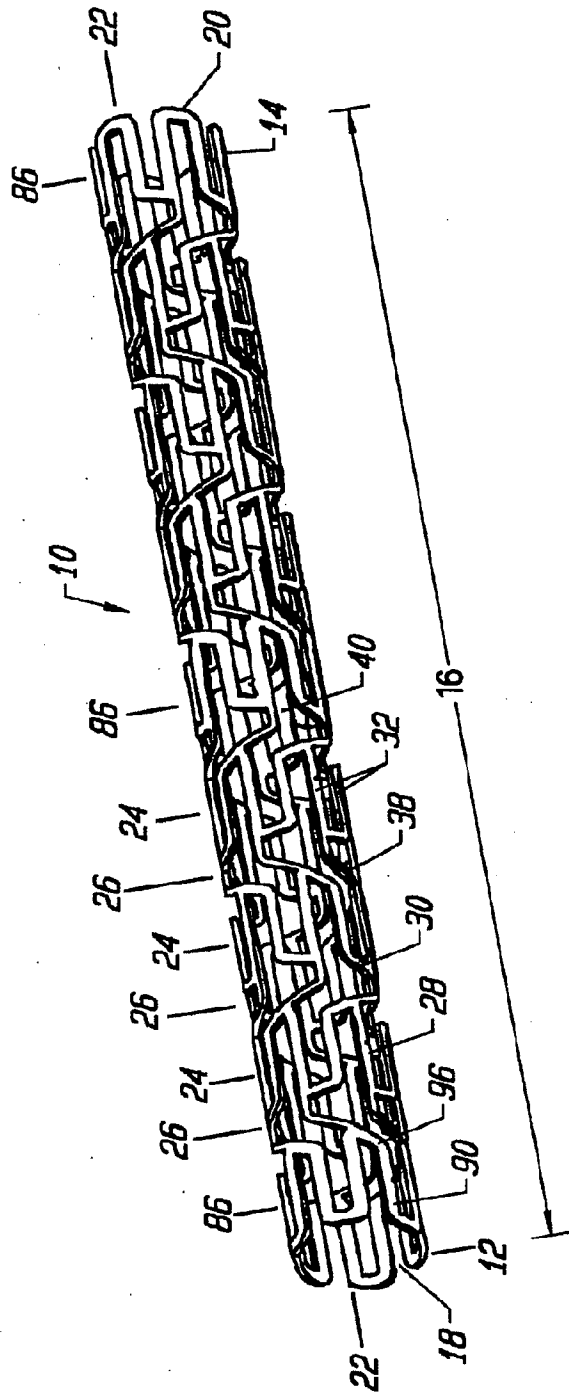
18-8

## U.S. Patent

**Jul. 13, 1999**

Sheet 8 of 27

**5,922,021**



18-9

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U.S. Patent

Jul. 13, 1999

Sheet 9 of 27

5,922,021

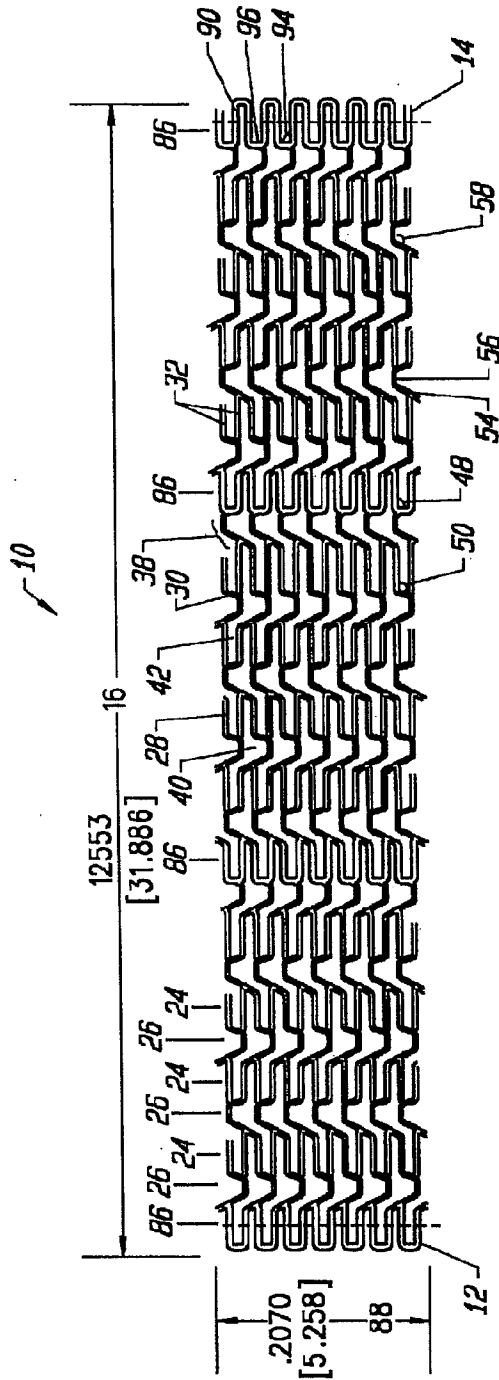


FIG. 7A

18-10

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U.S. Patent

Jul. 13, 1999

Sheet 10 of 27

5,922,021

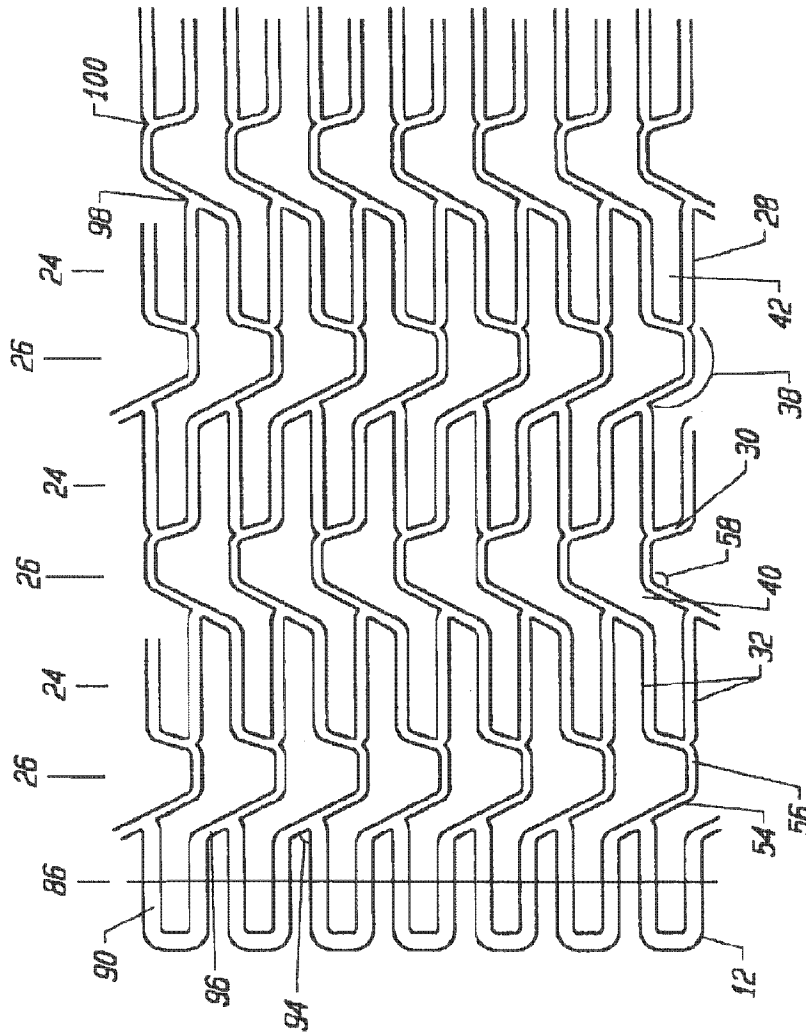


FIG. 7B

18-11

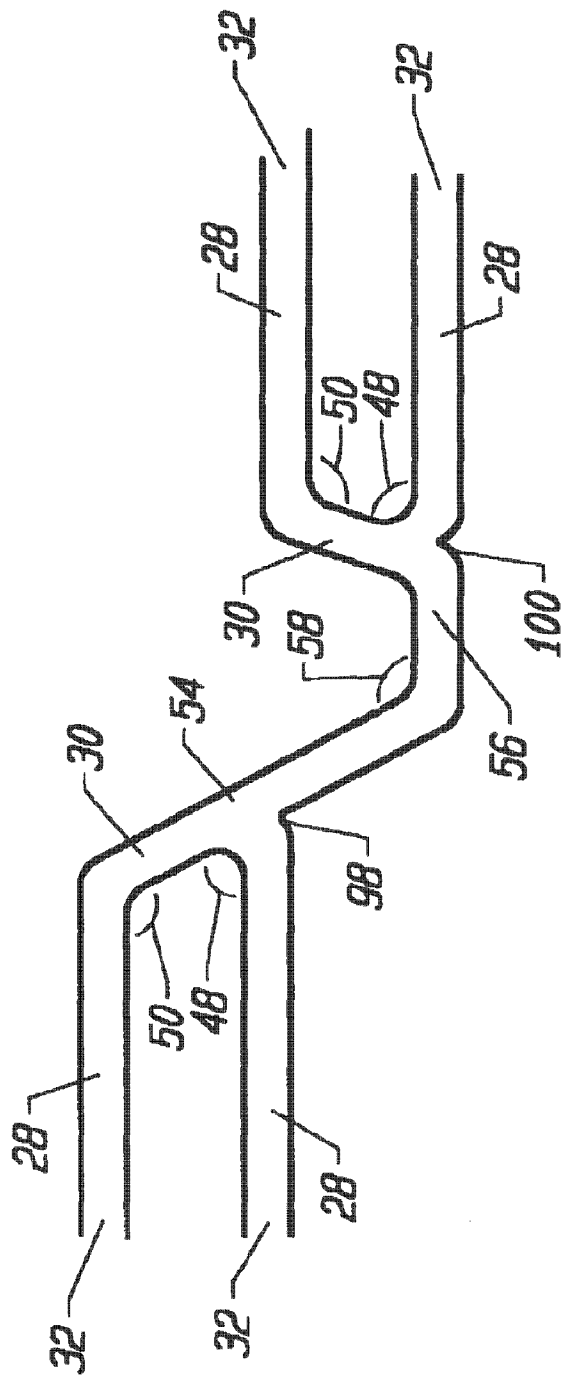


FIG. 7C

18-12

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U.S. Patent

Jul. 13, 1999

Sheet 12 of 27

5,922,021

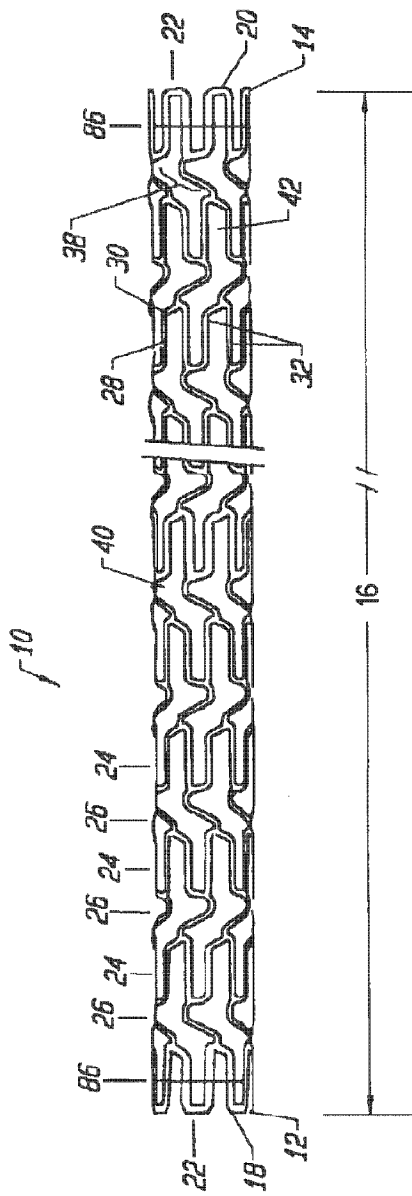


FIG. 8A

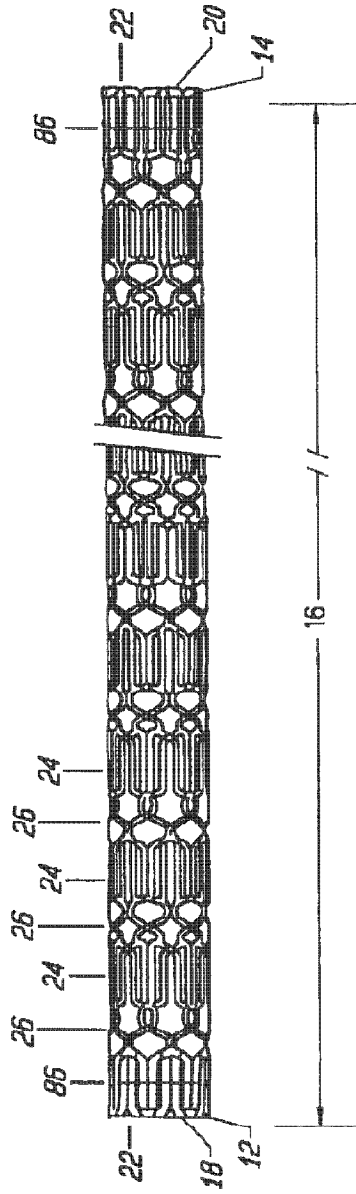


FIG. 8B

18.13

U.S. Patent

Jul. 13, 1999

Sheet 13 of 27

5,922,021

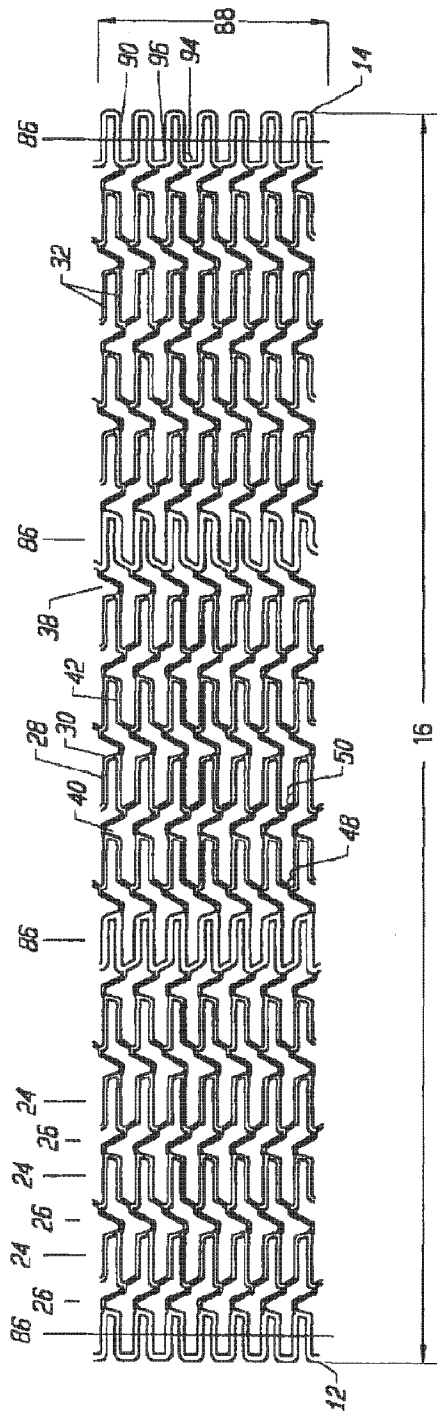


FIG. 8C

18-14

U.S. Patent

Jul. 13, 1999

Sheet 14 of 27

5,922,021

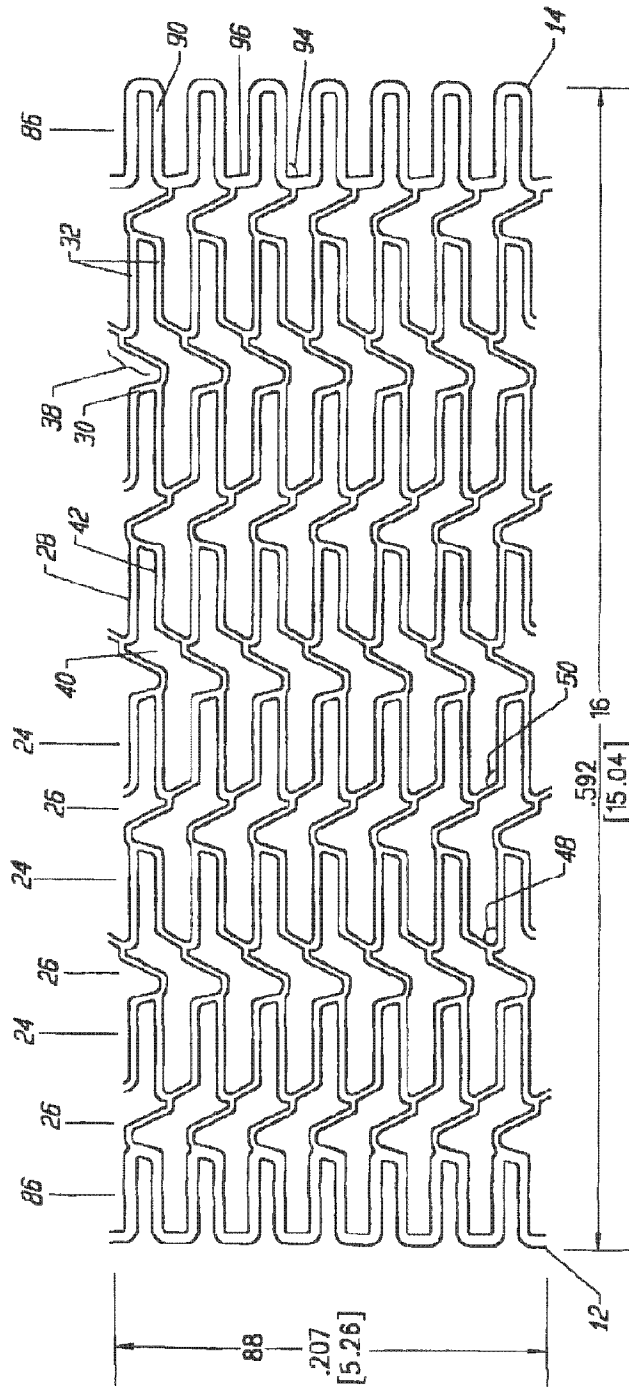


FIG. 80

18-15

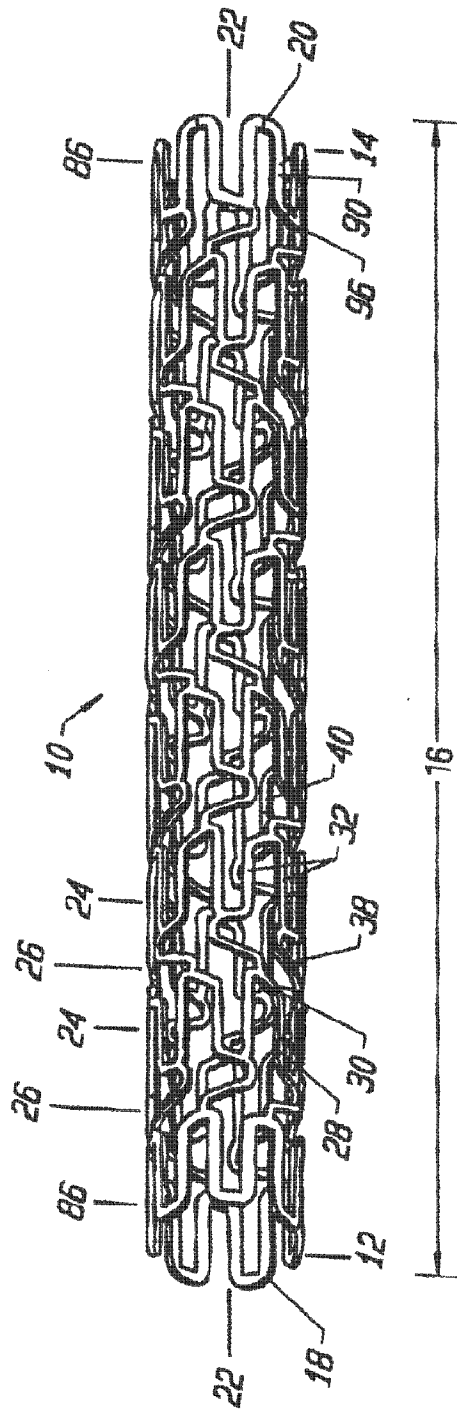
U.S. Patent

Jul. 13, 1999

Sheet 15 of 27

5,922,021

FIG. 8E



18-16

CM 000016

U.S. Patent

Jul. 13, 1999

Sheet 16 of 27

5,922,021

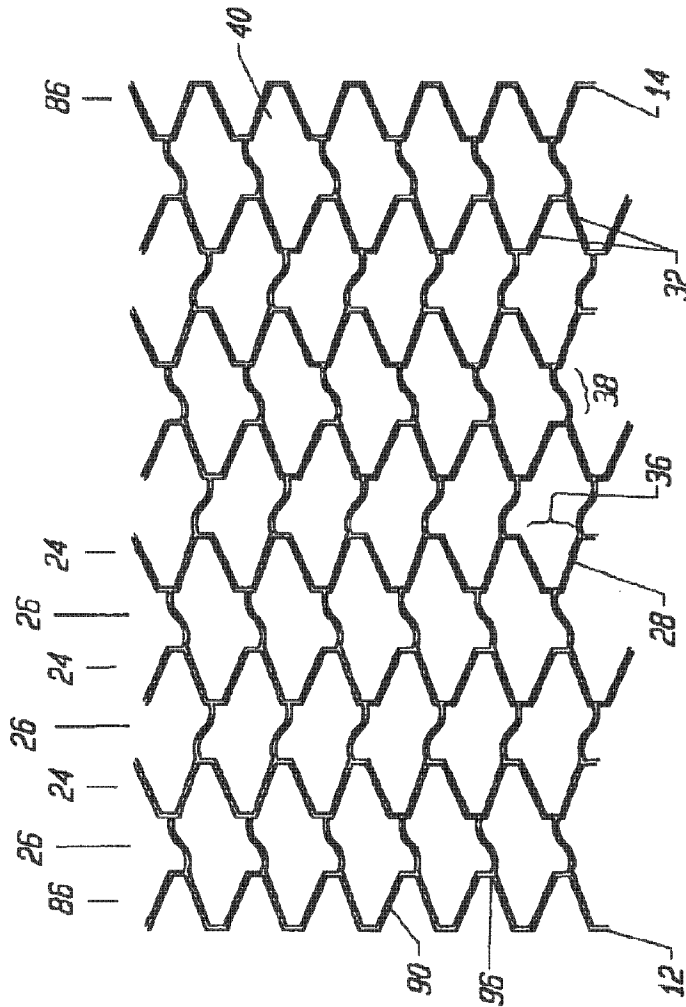
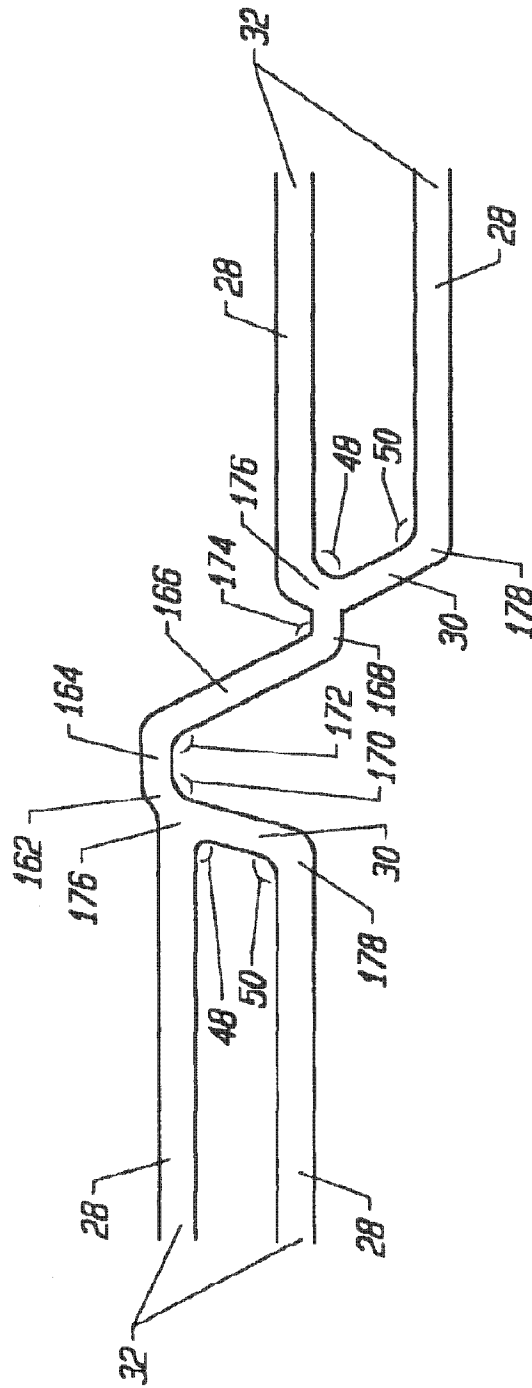


FIG. 8F

18-17



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18-18